

II. REMARKS

A. Introduction

In the May 19, 2005 Office Action, claims 12-17 and 23-28 are noted as pending and are rejected. In this Response, claims 12-17 and 23-28 are canceled, new claims 29-36 are added, and Remarks are provided.

The new claims are written to better recite the structural relationships of the components of the invention. Support for the new claims is found, e.g., in the specification as noted below, and in the canceled dependent claims.

B. The Present Invention

The following explanation is provided to assist the Examiner in examining the application, but is not intended to limit the scope of the claims.

As shown, e.g., in Figs. 1-3, the present invention includes an elongated heat exchange unit 10 having first and second opposing surfaces (front wall 15 and the opposing rear wall). Within the unit 10 there is located a first conduit 26 a second conduit 28 formed by a partition 24 and a box 12 extending along the length of the unit 10. The box 12 includes a deformable undulating foil wall 30, whose undulations 32 extend parallel with and are in fluid communication with the conduits 26 and 28. An inlet 20, located substantially midway along the length of the elongated unit 10 defines upper and lower portions of the box and extends from outside the building and is in fluid communications with the conduit 26. Adjacent the inlet 20 is an outlet extending from the second conduit 28 to outside the building to exhaust stale air to the outside.

A first fan 38 in the inlet 20 draws "fresh" air from outside the building into the conduit 26, which fresh air exits via openings 40 and 42 into a room in the building. A second fan 44 is located at one end of the conduit 28, and a third fan 46 is located at another end of the conduit 28. The fans 44 and 46 draw "stale" air from the room into the conduit 28 via openings 48 and 50, respectively.

The fans 38, 44 and 46 can be operatively selected for operation. When all three fans are on, pressure is exerted on both sides of the undulations, thereby opening channels in the undulations, with the fresh and stale air on either side of the undulations exchanging heat. With only the first and one of the second and third fans operating, pressure is exerted on both sides of the undulations in the portion of the box with the operating second or third fan, thereby opening channels in the undulations in that portion of the box, with the fresh and stale air on

either side of the undulations exchanging heat, but in the undulations in the other portion of the box are under pressure only from the fresh air, causing the undulations to close, so that the fresh and stale air in this other portion of the box with minimal heat exchange.

C. Rejection of the Claims Under
35 U.S.C. § 112, Second Paragraph

Various of the claims are rejected for indefinite recitations.

These claims have been canceled, and the new claims herein have been written to avoid these rejections.

D. Rejections Under 35 U.S.C. § 101 and
35 U.S.C. § 112, First and Second Paragraphs

In numbered paragraphs 5 on pages 3-4, 7 on pages 4-5, and 2 on pages 5-6, the Examiner indicates that the device does not work as recited, i.e., "no" recuperation of heat.

In the last response, claims 12 and 28 were amended to recite that there is an exchange of air without recuperation of heat. As clarified at, e.g., page 9, lines 21-26 of the specification, this term is qualified as meaning "a low amount of heat exchange." Thus, the term was not meant to mean a total absence of heat exchange, but a minimal amount of heat exchange.

The new claims herein are written to address this matter by indicating that, when all three fans are operating, and air pressure is exerted on both sides of the foil wall, the undulations open on both sides, and there is heat exchange between the fresh and stale air moving in adjacent conduits on either side of the wall. On the other hand, when the entry fan is pushing fresh air into the unit, and only one extraction fan is operating to exert pressure from stale air in the portion of the unit where this extraction fan is located, the undulations similarly open to allow heat exchange in that portion, but in the opposite portion of the unit, the other extraction fan is not operating to provide counter pressure, so the undulations do not open, and there is at best minimal heat exchange in that portion only. See, e.g., page 6, lines 13-18 and 24-28, page 8, lines 5-8 and 21-29, page 9, lines 1-30, and page 10, lines 1-3 and 16-29.

E. Rejection of Claims 12-17 and
23-28 Under 35 U.S.C. § 103(b)

Claims 12-17 and 23-28 are rejected as being made obvious by Oberschmid, of record.

As noted above, claims 12-17 and 23-28 are canceled herein. Nevertheless, for the following reasons, it is respectfully submitted that the present invention, as recited by the new claims, was not rendered obvious by the cited reference.

Oberschmid appears to show a flexible member that is merely suspended. It does not show any heat exchange unit structure having opposing surfaces that include therebetween a partition and a box for defining two fluid conduits, which box includes an undulating foil wall.

The reference also does not disclose or teach an entry fan which works with two extraction fans in fluid communication with the fluid conduits to exert relative air pressure on opposing sides of the undulating foil wall to selectively affect heat exchange. The fans herein cause a counter current circulation in the two fluid conduits. This feature is not at all disclosed or suggested by Oberschmid where the two streams are not both moving under pressure in opposing directions in different portions of the device.

Further, the fresh air and the stream of stale air both can be introduced under pressure, in the respective fluid conduits, to create open channels in the flexible foil wall, which allows the heat exchange between the fresh and stale air separated by the foil. Oberschmid lacks a structure wherein the fans and fluid conduits cooperate with an undulating flexible foil to selectively allow air pressure to affect the heat exchange.

Further, Oberschmid's structure requires valves (see the valves 13 in Figures 2b and 2c) for operation. The present invention uses only fans and conduits in fluid communication therewith, and does not require the use of valves. Thus, the respective fresh and stale air passages are recited as being in continuous fluid communication, which would not be true with a structure depending upon valves for operation.

III. CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that new claims 29-are in condition for allowance.

If there are any additional fees associated with this Response, please charge same to our Deposit Account No. 19-3935.

Finally, if there are any formal matters remaining after this Response, the undersigned would appreciate a telephone conference with the Examiner to attend to these matters.

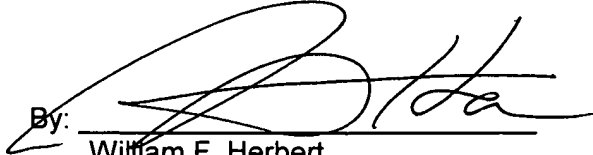
Respectfully submitted,

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